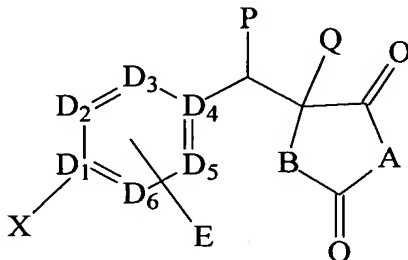


Claims

1. A composition comprising a carrier and a compound of Formula I

Formula I



wherein:

A is NH and B is sulfur;

D₁-D₆ are C;

E can be attached to one or more of the atoms located at D₂, D₃, D₅ or D₆;

P and Q are a double bond; and

E can be the same or different and is a moiety selected from the group consisting of H, C₁₋₁₀ alkyl, and substituted alkyl groups;

X is a substituted carboxylic group comprising -N-(C)₁₋₃-C(O)O- that is attached to D₁;

or salts of the compound of Formula I; or

A is NH and B is sulfur;

D₁-D₆ are C;

E can be attached to one or more of the atoms located at D₂, D₃, D₅ or D₆;

P and Q are hydrogen; and

E is hydrogen;

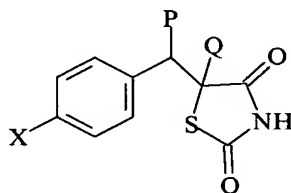
X is a substituted carboxylic group comprising -N-(C)₁₋₃-C(O)O- that is attached to D₁;

or salts of the compound of Formula I.

2. The composition according to claim 1, wherein said substituted carboxylic group comprising -N-(C)₁₋₃-C(O)-O- is a portion of a moiety selected from the group consisting of a heteroarylcarbonyloxy, heteroalkylcarbonyloxy, and each of which is optionally substituted with C₁₋₁₀ alkyl, CN, COOH, NO₂, NH₂, SO₂₋₄, C₁₋₂₀

heteroalkyl, C₂₋₂₀ alkenyl, alkynyl, alkynylaryl, alkynylheteroaryl, aryl, C₁₋₂₀ alkylaryl, C₂₋₂₀ alkenylaryl, heteroaryl, C₁₋₂₀ alkylheteroaryl, C₂₋₂₀ alkenylheteroaryl, cycloalkyl, heterocycloalkyl, C₁₋₂₀ alkylheterocycloalkyl, and C₁₋₂₀ alkylcycloalkyl, any of which may be optionally substituted with a moiety selected from the group consisting of C₁₋₆ alkyl, halogen, OH, NH₂, CN, NO₂, COOH, or SO₂₋₄.

3. The composition according to claim 1, wherein said compound has the formula



and wherein X, P, and Q are defined as:

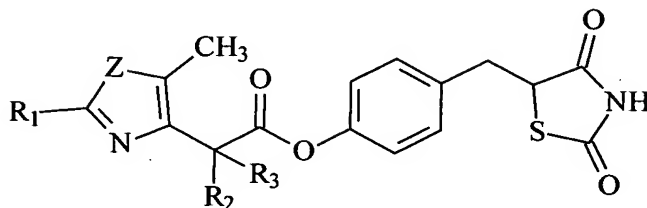
| Compound number | X | P and Q |
|-----------------|---|---------|
| 7 | | H; |
| 8 | | db |

or salts thereof.

4. The composition according to claim 3, wherein said compound is compound 7 or a salt thereof.

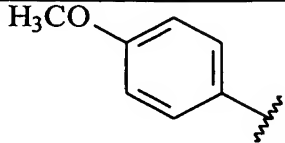
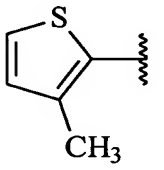
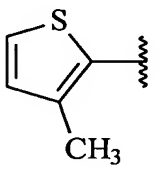
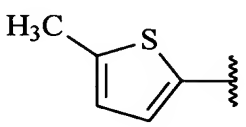
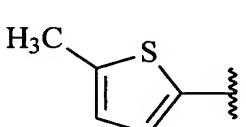
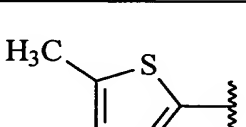
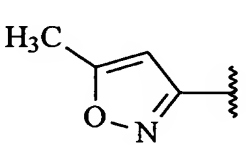
5. The composition according to claim 3, wherein said compound is compound 8 or a salt thereof.

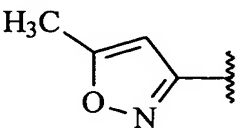
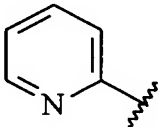
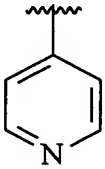
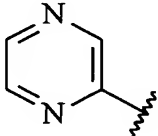
6. The composition according to claim 1, wherein said compound has the formula



and wherein R₁, R₂, R₃, and Z are defined as:

| Compound number | Z | R ₁ | R ₂ | R ₃ | |
|-----------------|---|----------------|-----------------|-----------------|---|
| 33 | O | | H | H | ; |
| 34 | O | | CH ₃ | H | ; |
| 35 | O | | CH ₃ | CH ₃ | ; |
| 36 | S | | CH ₃ | H | ; |
| 37 | O | | CH ₃ | H | ; |
| 38 | S | | CH ₃ | H | ; |
| 39 | O | | CH ₃ | H | ; |

| Compound number | Z | R ₁ | R ₂ | R ₃ | |
|-----------------|---|---|-----------------|----------------|---|
| 40 | S |  | CH ₃ | H | ; |
| 41 | O |  | CH ₃ | H | ; |
| 42 | S |  | CH ₃ | H | ; |
| 43 | O |  | H | H | ; |
| 44 | O |  | CH ₃ | H | ; |
| 45 | S |  | H | H | ; |
| 46 | O |  | CH ₃ | H | ; |

| Compound number | Z | R ₁ | R ₂ | R ₃ | |
|-----------------|---|--|-----------------|----------------|-------------------|
| 47 | S |  | H | H | ; |
| 48 | O |  | CH ₃ | H | ; |
| 49 | O |  | CH ₃ | H | ; or |
| 50 | O |  | CH ₃ | H | or salts thereof. |

7. The composition according to claim 6, wherein said compound is compound 33, or a salt thereof.

8. The composition according to claim 6, wherein said compound is compound 34, or a salt thereof.

9. The composition according to claim 6, wherein said compound is compound 35, or a salt thereof.

10. The composition according to claim 6, wherein said compound is compound 36, or a salt thereof.

11. The composition according to claim 6, wherein said compound is

compound 37, or a salt thereof.

12. The composition according to claim 6, wherein said compound is compound 38, or a salt thereof.

13. The composition according to claim 6, wherein said compound is compound 39, or a salt thereof.

14. The composition according to claim 6, wherein said compound is compound 40, or a salt thereof.

15. The composition according to claim 6, wherein said compound is compound 41, or a salt thereof.

16. The composition according to claim 6, wherein said compound is compound 42, or a salt thereof.

17. The composition according to claim 6, wherein said compound is compound 43, or a salt thereof.

18. The composition according to claim 6, wherein said compound is compound 44, or a salt thereof.

19. The composition according to claim 6, wherein said compound is compound 45, or a salt thereof.

20. The composition according to claim 6, wherein said compound is compound 46, or a salt thereof.

21. The composition according to claim 6, wherein said compound is compound 47, or a salt thereof.

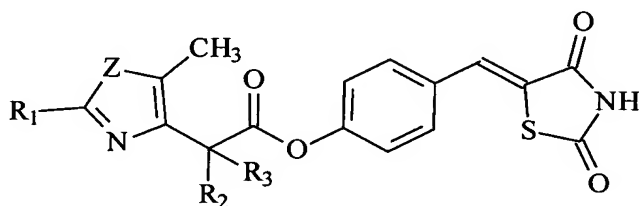
22. The composition according to claim 6, wherein said compound is

compound 48, or a salt thereof.

23. The composition according to claim 6, wherein said compound is compound 49, or a salt thereof.

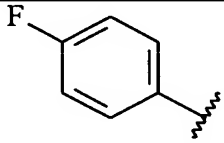
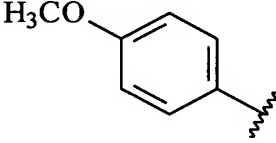
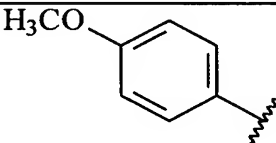
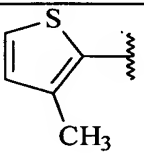
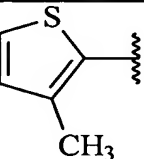
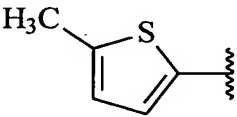
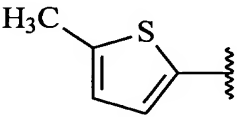
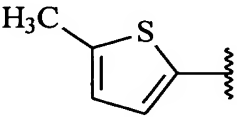
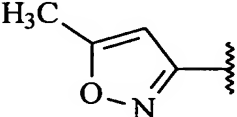
24. The composition according to claim 6, wherein said compound is compound 50, or a salt thereof.

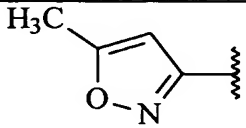
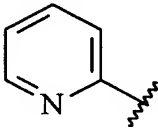
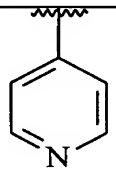
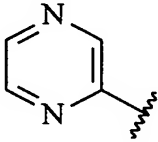
25. The composition according to claim 1, wherein said compound has the formula



and wherein R₁, R₂, R₃, and Z are defined as:

| Compound number | Z | R ₁ | R ₂ | R ₃ | |
|-----------------|---|----------------|-----------------|-----------------|---|
| 51 | O | | H | H | ; |
| 52 | O | | CH ₃ | H | ; |
| 53 | O | | CH ₃ | CH ₃ | ; |
| 54 | S | | CH ₃ | H | ; |
| 55 | O | | CH ₃ | H | ; |

| Compound number | Z | R ₁ | R ₂ | R ₃ | |
|-----------------|---|---|-----------------|----------------|---|
| 56 | S |  | CH ₃ | H | ; |
| 57 | O |  | CH ₃ | H | ; |
| 58 | S |  | CH ₃ | H | ; |
| 59 | O |  | CH ₃ | H | ; |
| 60 | S |  | CH ₃ | H | ; |
| 61 | O |  | H | H | ; |
| 62 | O |  | CH ₃ | H | ; |
| 63 | S |  | H | H | ; |
| 64 | O |  | CH ₃ | H | ; |

| Compound number | Z | R ₁ | R ₂ | R ₃ | |
|-----------------|---|---|-----------------|----------------|-------------------|
| 65 | S |  | H | H | ; |
| 66 | O |  | CH ₃ | H | ; |
| 67 | O |  | CH ₃ | H | ; or |
| 68 | O |  | CH ₃ | H | or salts thereof. |

26. The composition according to claim 25, wherein said compound is compound 51, or a salt thereof.

27. The composition according to claim 25, wherein said compound is compound 52, or a salt thereof.

28. The composition according to claim 25, wherein said compound is compound 53, or a salt thereof.

29. The composition according to claim 25, wherein said compound is compound 54, or a salt thereof.

30. The composition according to claim 25, wherein said compound is compound 55, or a salt thereof.

31. The composition according to claim 25, wherein said compound is compound 56, or a salt thereof.

32. The composition according to claim 25, wherein said compound is compound 57, or a salt thereof.

33. The composition according to claim 25, wherein said compound is compound 58, or a salt thereof.

34. The composition according to claim 25, wherein said compound is compound 59, or a salt thereof.

35. The composition according to claim 25, wherein said compound is compound 60, or a salt thereof.

36. The composition according to claim 25, wherein said compound is compound 61, or a salt thereof.

37. The composition according to claim 25, wherein said compound is compound 62, or a salt thereof.

38. The composition according to claim 25, wherein said compound is compound 63, or a salt thereof.

39. The composition according to claim 25, wherein said compound is compound 64, or a salt thereof.

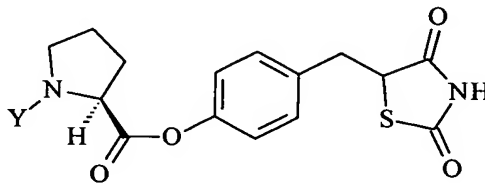
40. The composition according to claim 25, wherein said compound is compound 65, or a salt thereof.

41. The composition according to claim 25, wherein said compound is compound 66, or a salt thereof.

42. The composition according to claim 25, wherein said compound is compound 67, or a salt thereof.

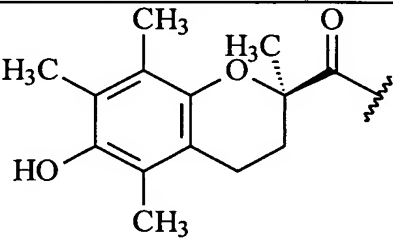
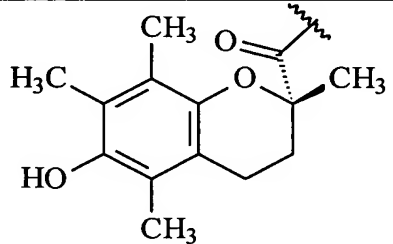
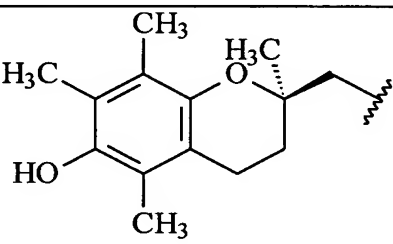
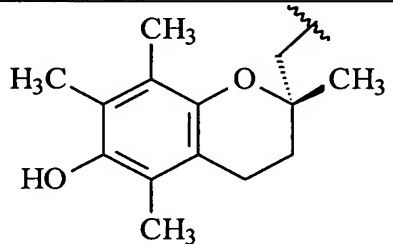
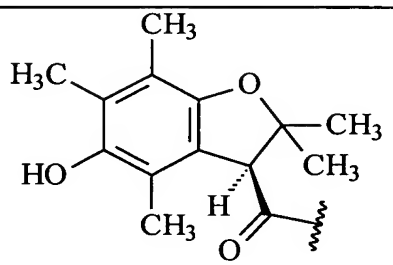
43. The composition according to claim 25, wherein said compound is compound 68, or a salt thereof.

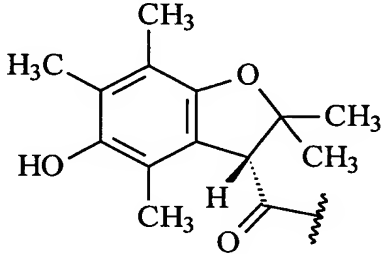
44. The composition according to claim 1, wherein said compound has the formula



and wherein Y is defined as:

| Compound Number | Y |
|-----------------|---|
| 105 | ; |
| 106 | ; |
| 107 | ; |
| 108 | ; |

| Compound Number | Y |
|-----------------|---|
| 109 |  ; |
| 110 |  ; |
| 111 |  ; |
| 112 |  ; |
| 113 |  ; or |

| Compound Number | Y |
|-----------------|--|
| 114 |  |

or salts thereof.

45. The composition according to claim 44, wherein said compound is compound 105, or a salt thereof.

46. The composition according to claim 44, wherein said compound is compound 106, or a salt thereof.

47. The composition according to claim 44, wherein said compound is compound 107, or a salt thereof.

48. The composition according to claim 44, wherein said compound is compound 108, or a salt thereof.

49. The composition according to claim 44, wherein said compound is compound 109, or a salt thereof.

50. The composition according to claim 44, wherein said compound is compound 110, or a salt thereof.

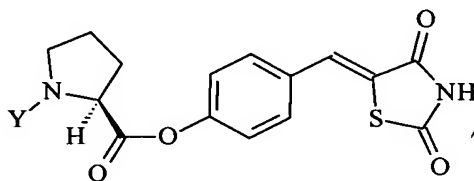
51. The composition according to claim 44, wherein said compound is compound 111, or a salt thereof.

52. The composition according to claim 44, wherein said compound is compound 112, or a salt thereof.

53. The composition according to claim 44, wherein said compound is compound 113, or a salt thereof.

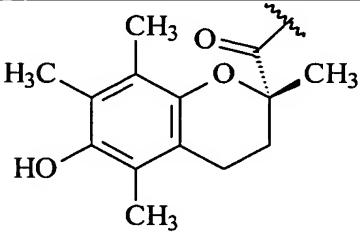
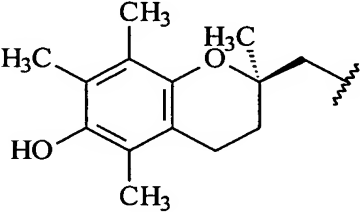
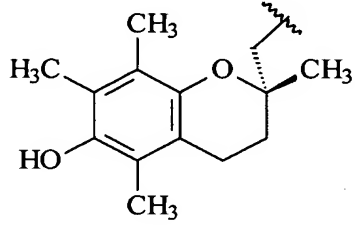
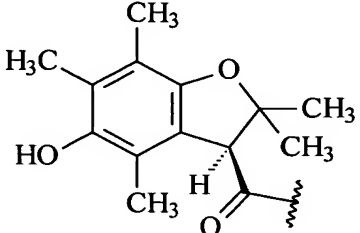
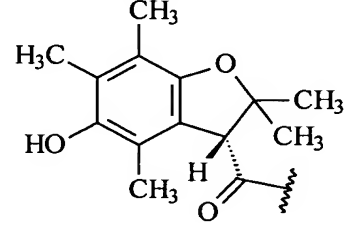
54. The composition according to claim 44, wherein said compound is compound 114, or a salt thereof.

55. The composition according to claim 1, wherein said compound has the formula



and wherein Y is defined as:

| Compound number | Y |
|-----------------|---|
| 115 | ; |
| 116 | ; |
| 117 | ; |
| 118 | ; |
| 119 | ; |

| Compound number | Y |
|-----------------|--|
| 120 |  |
| 121 |  |
| 122 |  |
| 123 |  |
| 124 |  |

56. The composition according to claim 55, wherein said compound is compound 115, or a salt thereof.

57. The composition according to claim 55, wherein said compound is compound 116, or a salt thereof.

58. The composition according to claim 55, wherein said compound is compound 117, or a salt thereof.

59. The composition according to claim 55, wherein said compound is compound 118, or a salt thereof.

60. The composition according to claim 55, wherein said compound is compound 119, or a salt thereof.

61. The composition according to claim 55, wherein said compound is compound 120, or a salt thereof.

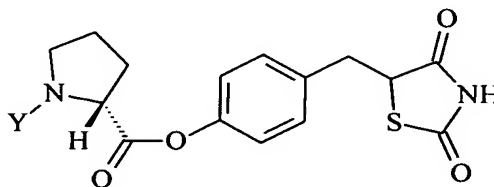
62. The composition according to claim 55, wherein said compound is compound 121, or a salt thereof.

63. The composition according to claim 55, wherein said compound is compound 122, or a salt thereof.

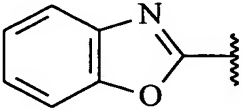
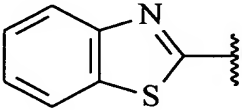
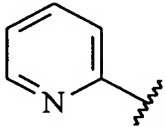
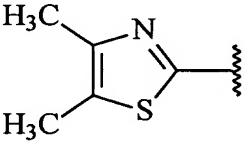
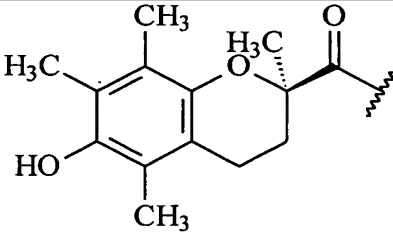
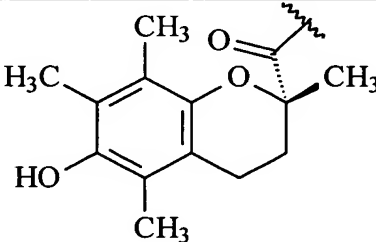
64. The composition according to claim 55, wherein said compound is compound 123, or a salt thereof.

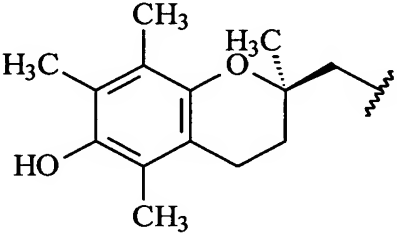
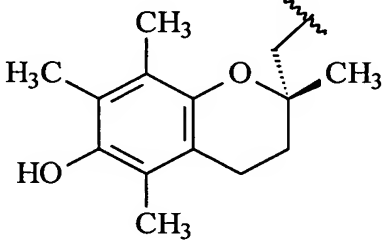
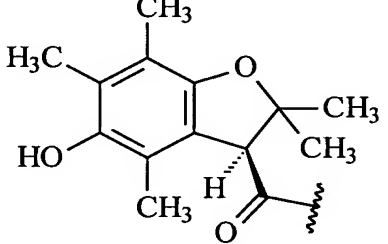
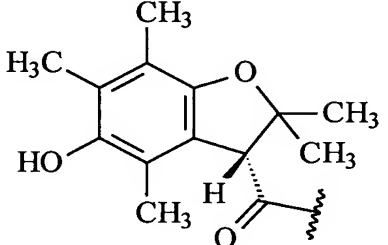
65. The composition according to claim 55, wherein said compound is compound 124, or a salt thereof.

66. The composition according to claim 1, wherein said compound has the formula



and wherein Y is defined as:

| Compound number | Y |
|-----------------|--|
| 125 |  |
| 126 |  |
| 127 |  |
| 128 |  |
| 129 |  |
| 130 |  |

| Compound number | Y |
|-----------------|--|
| 131 |  |
| 132 |  |
| 133 |  |
| 134 |  |

67. The composition according to claim 66, wherein said compound is compound 125, or a salt thereof.

68. The composition according to claim 66, wherein said compound is compound 126, or a salt thereof.

69. The composition according to claim 66, wherein said compound is compound 127, or a salt thereof.

70. The composition according to claim 66, wherein said compound is compound 128, or a salt thereof.

71. The composition according to claim 66, wherein said compound is compound 129, or a salt thereof.

72. The composition according to claim 66, wherein said compound is compound 130, or a salt thereof.

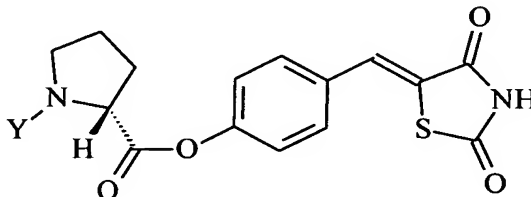
73. The composition according to claim 66, wherein said compound is compound 131, or a salt thereof.

74. The composition according to claim 66, wherein said compound is compound 132, or a salt thereof.

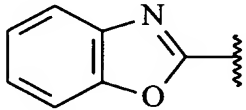
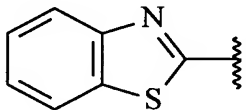
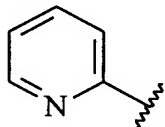
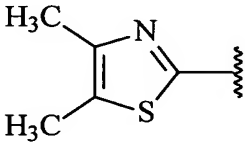
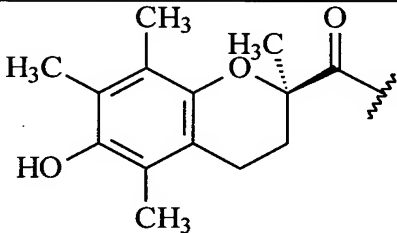
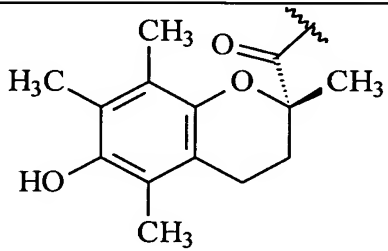
75. The composition according to claim 66, wherein said compound is compound 133, or a salt thereof.

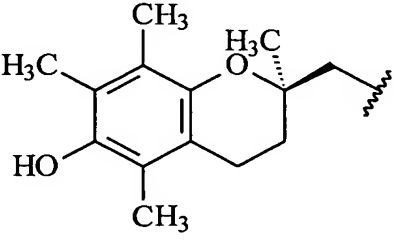
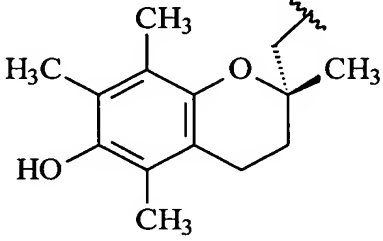
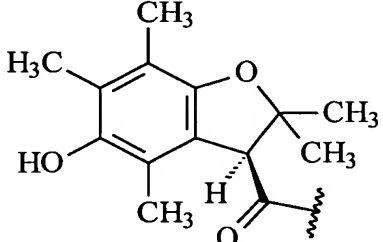
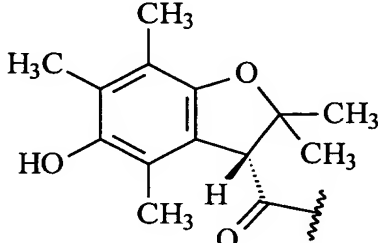
76. The composition according to claim 66, wherein said compound is compound 134, or a salt thereof.

77. The composition according to claim 1, wherein said compound has the formula



and wherein Y is defined as:

| Compound number | Y |
|-----------------|--|
| 135 |  ; |
| 136 |  ; |
| 137 |  ; |
| 138 |  ; |
| 139 |  ; |
| 140 |  ; |

| Compound number | Y |
|--------------------|--|
| 141 |  |
| 142 |  |
| 143 |  |
| 144 |  |

78. The composition according to claim 77, wherein said compound is compound 135, or a salt thereof.

79. The composition according to claim 77, wherein said compound is compound 136, or a salt thereof.

80. The composition according to claim 77, wherein said compound is compound 137, or a salt thereof.

81. The composition according to claim 77, wherein said compound is compound 138, or a salt thereof.

82. The composition according to claim 77, wherein said compound is compound 139, or a salt thereof.

83. The composition according to claim 77, wherein said compound is compound 140, or a salt thereof.

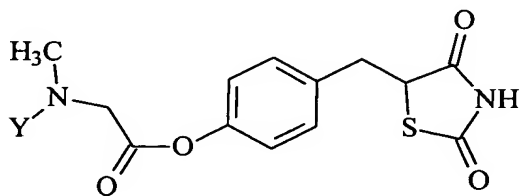
84. The composition according to claim 77, wherein said compound is compound 141, or a salt thereof.

85. The composition according to claim 77, wherein said compound is compound 142, or a salt thereof.

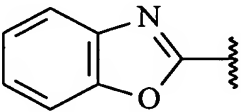
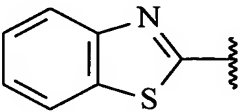
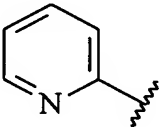
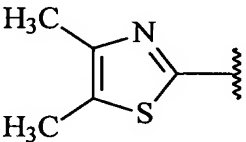
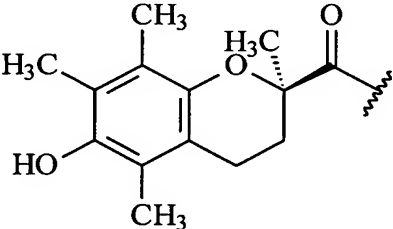
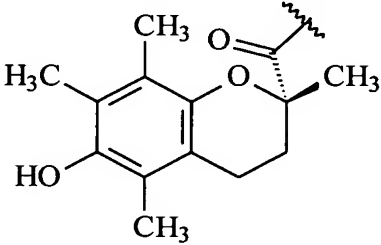
86. The composition according to claim 77, wherein said compound is compound 143, or a salt thereof.

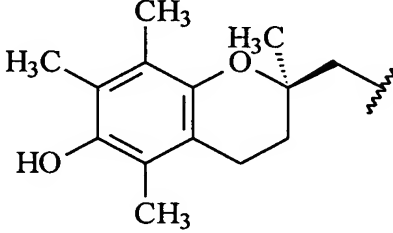
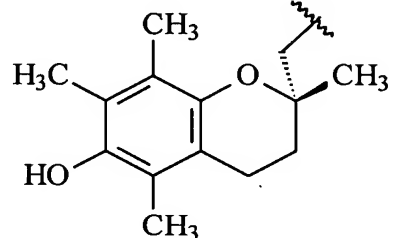
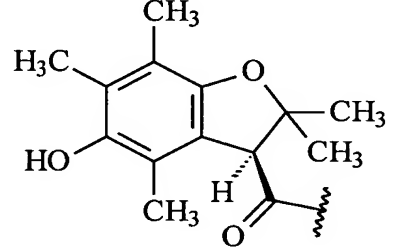
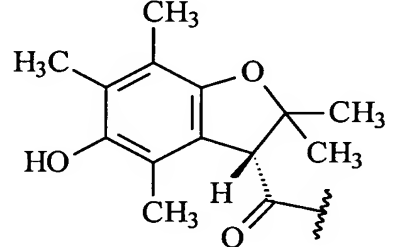
87. The composition according to claim 77, wherein said compound is compound 144, or a salt thereof.

88. The composition according to claim 1, wherein said compound has the formula



and wherein Y is defined as:

| Compound number | Y |
|-----------------|--|
| 185 |  ; |
| 186 |  ; |
| 187 |  ; |
| 188 |  ; |
| 189 |  ; |
| 190 |  ; |

| Compound number | Y |
|-----------------|--|
| 191 |  |
| 192 |  |
| 193 |  |
| 194 |  |

89. The composition according to claim 88, wherein said compound is compound 185, or a salt thereof.

90. The composition according to claim 88, wherein said compound is compound 186, or a salt thereof.

91. The composition according to claim 88, wherein said compound is compound 187, or a salt thereof.

92. The composition according to claim 88, wherein said compound is compound 188, or a salt thereof.

93. The composition according to claim 88, wherein said compound is compound 189, or a salt thereof.

94. The composition according to claim 88, wherein said compound is compound 190, or a salt thereof.

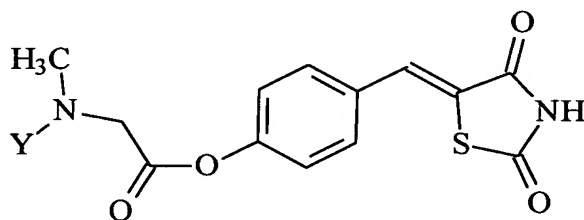
95. The composition according to claim 88, wherein said compound is compound 191, or a salt thereof.

96. The composition according to claim 88, wherein said compound is compound 192, or a salt thereof.

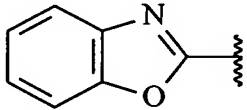
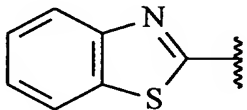
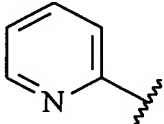
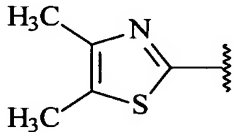
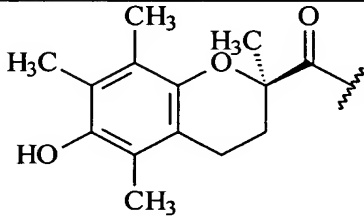
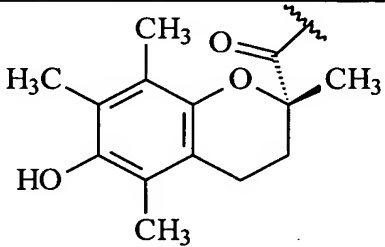
97. The composition according to claim 88, wherein said compound is compound 193, or a salt thereof.

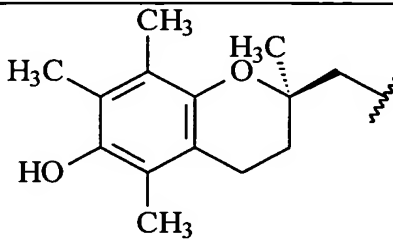
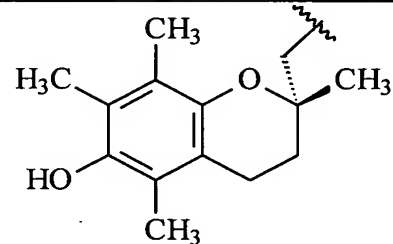
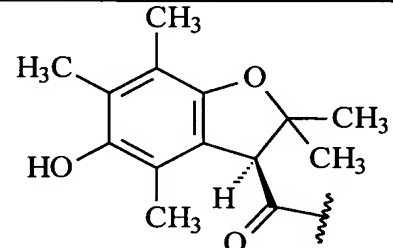
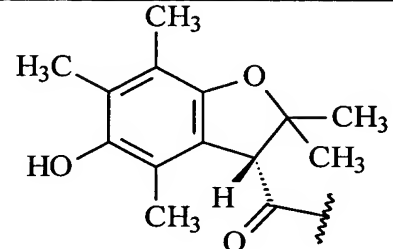
98. The composition according to claim 88, wherein said compound is compound 194, or a salt thereof.

99. The composition according to claim 1, wherein said compound has the formula



and wherein Y is defined as:

| Compound number | Y |
|-----------------|--|
| 195 |  ; |
| 196 |  ; |
| 197 |  ; |
| 198 |  ; |
| 199 |  ; |
| 200 |  ; |

| Compound number | Y |
|--------------------|--|
| 201 |  |
| 202 |  |
| 203 |  |
| 204 |  |

100. The composition according to claim 99, wherein said compound is compound 195, or a salt thereof.

101. The composition according to claim 99, wherein said compound is compound 196, or a salt thereof.

102. The composition according to claim 99, wherein said compound is compound 197, or a salt thereof.

103. The composition according to claim 99, wherein said compound is compound 198, or a salt thereof.

104. The composition according to claim 99, wherein said compound is compound 199, or a salt thereof.

105. The composition according to claim 99, wherein said compound is compound 200, or a salt thereof.

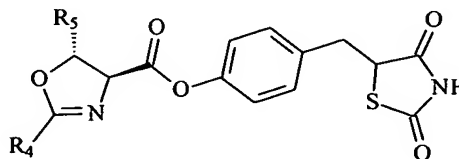
106. The composition according to claim 99, wherein said compound is compound 201, or a salt thereof.

107. The composition according to claim 99, wherein said compound is compound 202, or a salt thereof.

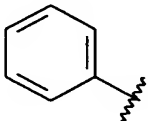
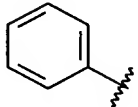
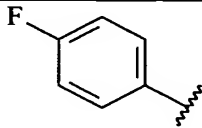
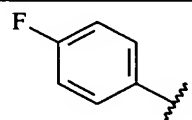
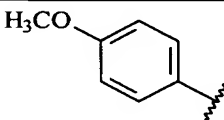
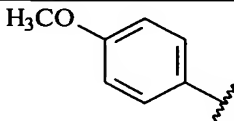
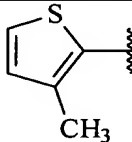
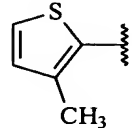
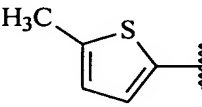
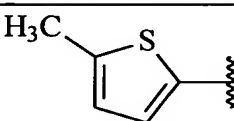
108. The composition according to claim 99, wherein said compound is compound 203, or a salt thereof.

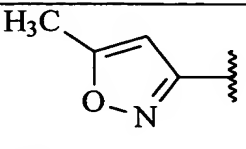
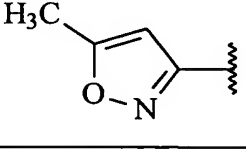
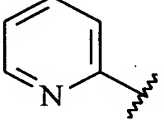
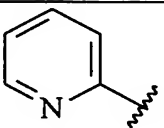
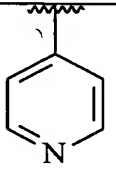
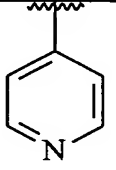
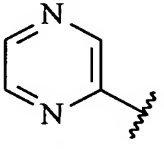
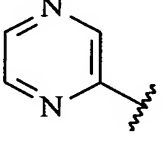
109. The composition according to claim 99, wherein said compound is compound 204, or a salt thereof.

110. The composition according to claim 1, wherein said compound has the formula



and wherein R₄ and R₅ are defined as:

| Compound number | R ₄ | R ₅ |
|-----------------|---|-------------------|
| 225 |  | H ; |
| 226 |  | CH ₃ ; |
| 227 |  | H ; |
| 228 |  | CH ₃ ; |
| 229 |  | H ; |
| 230 |  | CH ₃ ; |
| 231 |  | H ; |
| 232 |  | CH ₃ ; |
| 233 |  | H ; |
| 234 |  | CH ₃ ; |

| Compound number | R ₄ | R ₅ |
|-----------------|---|-----------------------------------|
| 235 |  | H ; |
| 236 |  | CH ₃ ; |
| 237 |  | H ; |
| 238 |  | CH ₃ ; |
| 239 |  | H ; |
| 240 |  | CH ₃ ; |
| 241 |  | H ; or |
| 242 |  | CH ₃ or salts thereof. |

111. The composition according to claim 110 wherein said compound is compound 225, or a salt thereof.

112. The composition according to claim 110, wherein said compound is compound 226, or a salt thereof.

113. The composition according to claim 110, wherein said compound is compound 227, or a salt thereof.

114. The composition according to claim 110, wherein said compound is compound 228, or a salt thereof.

115. The composition according to claim 110, wherein said compound is compound 229, or a salt thereof.

116. The composition according to claim 110, wherein said compound is compound 230, or a salt thereof.

117. The composition according to claim 110, wherein said compound is compound 231, or a salt thereof.

118. The composition according to claim 110, wherein said compound is compound 232, or a salt thereof.

119. The composition according to claim 110, wherein said compound is compound 233, or a salt thereof.

120. The composition according to claim 110, wherein said compound is compound 234, or a salt thereof.

121. The composition according to claim 110, wherein said compound is compound 235, or a salt thereof.

122. The composition according to claim 110, wherein said compound is compound 236, or a salt thereof.

123. The composition according to claim 110, wherein said compound is

compound 237, or a salt thereof.

124. The composition according to claim 110, wherein said compound is compound 238, or a salt thereof.

125. The composition according to claim 110, wherein said compound is compound 239, or a salt thereof.

126. The compound, according to claim 110, wherein said compound is compound 240, or a salt thereof.

127. The composition according to claim 110, wherein said compound is compound 241, or a salt thereof.

128. The composition according to claim 110, wherein said compound is compound 242, or a salt thereof.

129. The composition according to claim 1, wherein:
A is NH and B is sulfur;
D₁-D₆ are C;
E can be attached to one or more of the atoms located at D₂, D₃, D₅ or D₆;
P and Q are a double bond;
E can be the same or different and is a moiety selected from the group consisting of H, C₁₋₁₀ alkyl, and substituted alkyl groups; and
X is a substituted carboxylic group comprising -N-(C)₁₋₃-C(O)O- that is attached to D₁;
or salts of the compound of Formula I.

130. The composition according to claim 1, wherein
A is NH and B is sulfur;
D₁-D₆ are C;
E can be attached to one or more of the atoms located at D₂, D₃, D₅ or D₆;

P and Q are hydrogen;

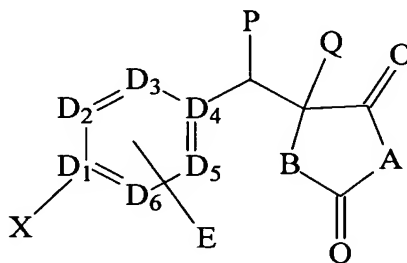
E is hydrogen; and

X is a substituted carboxylic group comprising $-N-(C)_{1-3}-C(O)O-$ that is attached to D_1 ;

or salts of the compound of Formula I.

131. A method of treating diabetes, atherosclerosis, hypercholesterolemia, or hyperlipidemia comprising the administration of a therapeutically effective amount of the composition comprising a carrier and a compound of Formula I

Formula I



wherein:

A is NH and B is sulfur;

D_1 - D_6 are C;

E can be attached to one or more of the atoms located at D_2 , D_3 , D_5 or D_6 ;

P and Q are a double bond; and

E can be the same or different and is a moiety selected from the group consisting of H, C_{1-10} alkyl, and substituted alkyl groups;

X is a substituted carboxylic group comprising $-N-(C)_{1-3}-C(O)O-$ that is attached to D_1 ;

or salts of the compound of Formula I; or

A is NH and B is sulfur;

D_1 - D_6 are C;

E can be attached to one or more of the atoms located at D_2 , D_3 , D_5 or D_6 ;

P and Q are hydrogen; and

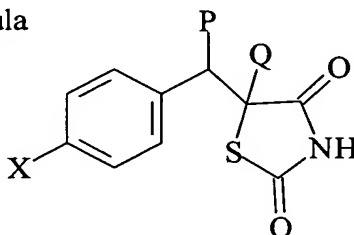
E is hydrogen;

X is a substituted carboxylic group comprising $-N-(C)_{1-3}-C(O)O-$ that is attached to D_1 ;

or salts of the compound of Formula I.

132. The method according to claim 131, wherein said substituted carboxylic acid group comprising $-N-(C)_{1-3}-C(O)-O-$ is a portion of a moiety selected from the group consisting of a heteroarylcarbonyloxy, heteroalkylcarbonyloxy, and each of which is optionally substituted with C_{1-10} alkyl, CN, COOH, NO_2 , NH_2 , SO_{2-4} , C_{1-20} heteroalkyl, C_{2-20} alkenyl, alkynyl, alkynylaryl, alkynylheteroaryl, aryl, C_{1-20} alkylaryl, C_{2-20} alkenylaryl, heteroaryl, C_{1-20} alkylheteroaryl, C_{2-20} alkenylheteroaryl, cycloalkyl, heterocycloalkyl, C_{1-20} alkylheterocycloalkyl, and C_{1-20} alkylcycloalkyl, any of which may be optionally substituted with a moiety selected from the group consisting of C_{1-6} alkyl, halogen, OH, NH_2 , CN, NO_2 , COOH, or SO_{2-4} .

133. The method according to claim 131, wherein the compound of said composition has the formula



and wherein X, P, and Q are defined as:

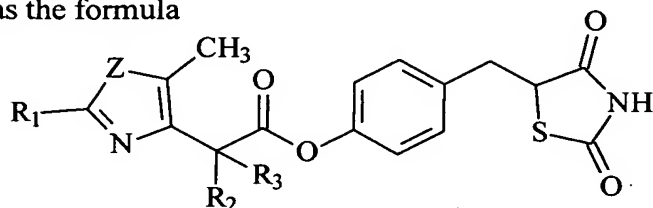
| Compound number | X | P and Q |
|-----------------|---|---------|
| 7 | | H; |
| 8 | | db |

or salts thereof.

134. The method according to claim 133, wherein the compound of said composition is compound 7 or a salt thereof.

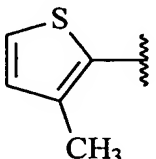
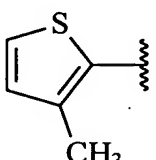
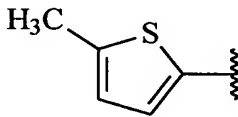
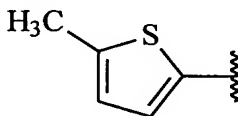
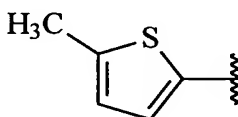
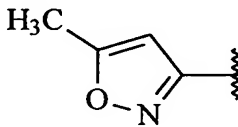
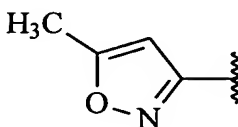
135. The method according to claim 133, wherein the compound of said composition is compound 8 or a salt thereof.

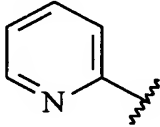
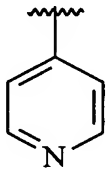
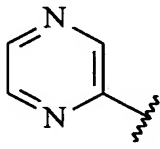
136. The method according to claim 131, wherein the compound of said composition has the formula



and wherein R₁, R₂, R₃, and Z are defined as:

| Compound number | Z | R ₁ | R ₂ | R ₃ | |
|-----------------|---|----------------|-----------------|-----------------|---|
| 33 | O | | H | H | ; |
| 34 | O | | CH ₃ | H | ; |
| 35 | O | | CH ₃ | CH ₃ | ; |
| 36 | S | | CH ₃ | H | ; |
| 37 | O | | CH ₃ | H | ; |
| 38 | S | | CH ₃ | H | ; |
| 39 | O | | CH ₃ | H | ; |
| 40 | S | | CH ₃ | H | ; |

| Compound number | Z | R ₁ | R ₂ | R ₃ |
|-----------------|---|---|-----------------|----------------|
| 41 | O |  | CH ₃ | H ; |
| 42 | S |  | CH ₃ | H ; |
| 43 | O |  | H | H ; |
| 44 | O |  | CH ₃ | H ; |
| 45 | S |  | H | H ; |
| 46 | O |  | CH ₃ | H ; |
| 47 | S |  | H | H ; |

| Compound number | Z | R ₁ | R ₂ | R ₃ | |
|-----------------|---|---|-----------------|----------------|-------------------|
| 48 | O |  | CH ₃ | H | ; |
| 49 | O |  | CH ₃ | H | ; or |
| 50 | O |  | CH ₃ | H | or salts thereof. |

137. The method according to claim 136, wherein the compound of said composition is compound 33, or a salt thereof.

138. The method according to claim 136, wherein the compound of said composition is compound 34, or a salt thereof.

139. The method according to claim 136, wherein the compound of said composition is compound 35, or a salt thereof.

140. The method according to claim 136, wherein the compound of said composition is compound 36, or a salt thereof.

141. The method according to claim 136, wherein the compound of said composition is compound 37, or a salt thereof.

142. The method according to claim 136, wherein the compound of said composition is compound 38, or a salt thereof.

143. The method according to claim 136, wherein the compound of said composition is compound 39, or a salt thereof.

144. The method according to claim 136, wherein the compound of said composition is compound 40, or a salt thereof.

145. The method according to claim 136, wherein the compound of said composition is compound 41, or a salt thereof.

146. The method according to claim 136, wherein the compound of said composition is compound 42, or a salt thereof.

147. The method according to claim 136, wherein the compound of said composition is compound 43, or a salt thereof.

148. The method according to claim 136, wherein the compound of said composition is compound 44, or a salt thereof.

149. The method according to claim 136, wherein the compound of said composition is compound 45, or a salt thereof.

150. The method according to claim 136, wherein the compound of said composition is compound 46, or a salt thereof.

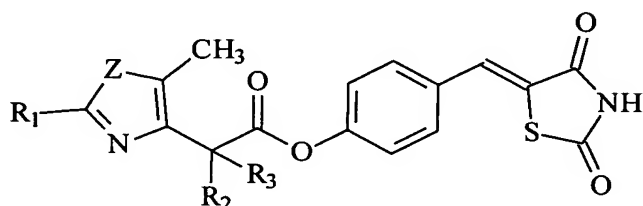
151. The method according to claim 136, wherein the compound of said composition is compound 47, or a salt thereof.

152. The method according to claim 136, wherein the compound of said composition is compound 48, or a salt thereof.

153. The method according to claim 136, wherein the compound of said composition is compound 49, or a salt thereof.

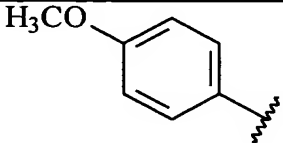
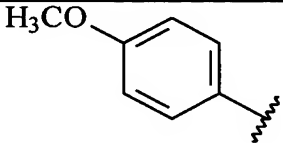
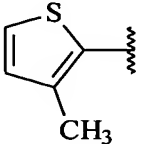
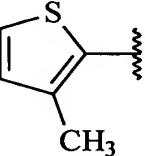
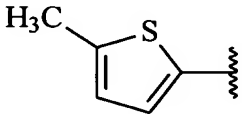
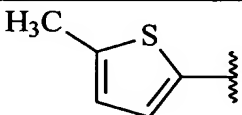
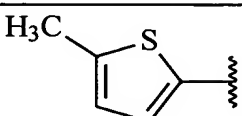
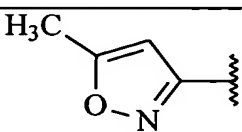
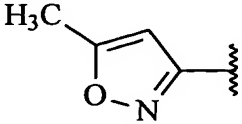
154. The method according to claim 136, wherein the compound of said composition is compound 50, or a salt thereof.

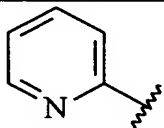
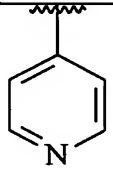
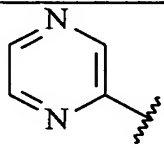
155. The method according to claim 131, wherein the compound of said composition has the formula



and wherein R₁, R₂, R₃, and Z are defined as:

| Compound number | Z | R ₁ | R ₂ | R ₃ | |
|-----------------|---|----------------|-----------------|-----------------|---|
| 51 | O | | H | H | ; |
| 52 | O | | CH ₃ | H | ; |
| 53 | O | | CH ₃ | CH ₃ | ; |
| 54 | S | | CH ₃ | H | ; |
| 55 | O | | CH ₃ | H | ; |
| 56 | S | | CH ₃ | H | ; |

| Compound number | Z | R ₁ | R ₂ | R ₃ |
|-----------------|---|---|-----------------|----------------|
| 57 | O |  | CH ₃ | H ; |
| 58 | S |  | CH ₃ | H ; |
| 59 | O |  | CH ₃ | H ; |
| 60 | S |  | CH ₃ | H ; |
| 61 | O |  | H | H ; |
| 62 | O |  | CH ₃ | H ; |
| 63 | S |  | H | H ; |
| 64 | O |  | CH ₃ | H ; |
| 65 | S |  | H | H ; |

| Compound number | Z | R ₁ | R ₂ | R ₃ | |
|-----------------|---|---|-----------------|----------------|-------------------|
| 66 | O |  | CH ₃ | H | ; |
| 67 | O |  | CH ₃ | H | ; or |
| 68 | O |  | CH ₃ | H | or salts thereof. |

156. The method according to claim 155, wherein the compound of said composition is compound 51, or a salt thereof.

157. The method according to claim 155, wherein the compound of said composition is compound 52, or a salt thereof.

158. The method according to claim 155, wherein the compound of said composition is compound 53, or a salt thereof.

159. The method according to claim 155, wherein the compound of said composition is compound 54, or a salt thereof.

160. The method according to claim 155, wherein the compound of said composition is compound 55, or a salt thereof.

161. The method according to claim 155, wherein the compound of said composition is compound 56, or a salt thereof.

162. The method according to claim 155, wherein the compound of said composition is compound 57, or a salt thereof.

163. The method according to claim 155, wherein the compound of said composition is compound 58, or a salt thereof.

164. The method according to claim 155, wherein the compound of said composition is compound 59, or a salt thereof.

165. The method according to claim 155, wherein the compound of said composition is compound 60, or a salt thereof.

166. The method according to claim 155, wherein the compound of said composition is compound 61, or a salt thereof.

167. The method according to claim 155, wherein the compound of said composition is compound 62, or a salt thereof.

168. The method according to claim 155, wherein the compound of said composition is compound 63, or a salt thereof.

169. The method according to claim 155, wherein the compound of said composition is compound 64, or a salt thereof.

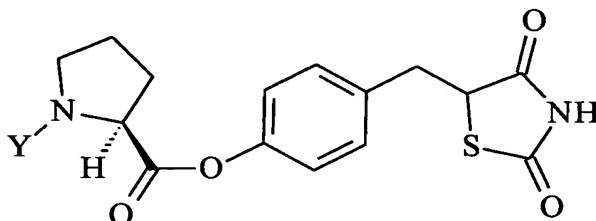
170. The method according to claim 155, wherein the compound of said composition is compound 65, or a salt thereof.

171. The method according to claim 155, wherein the compound of said composition is compound 66, or a salt thereof.

172. The method according to claim 155, wherein the compound of said composition is compound 67, or a salt thereof.

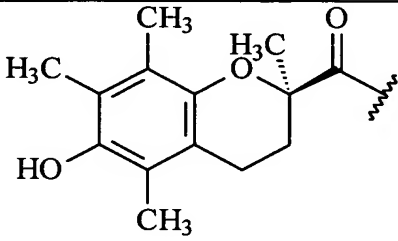
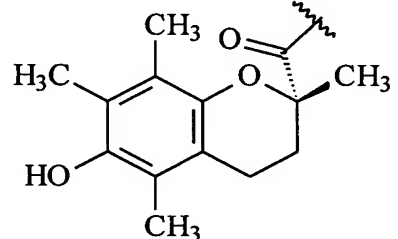
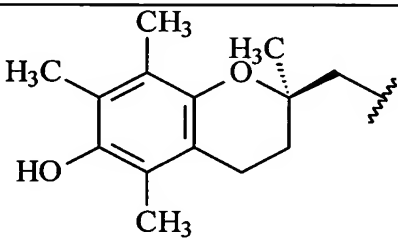
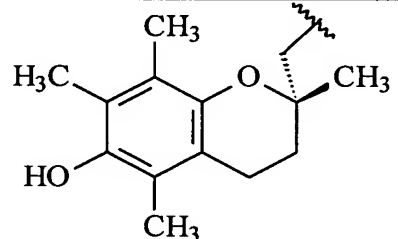
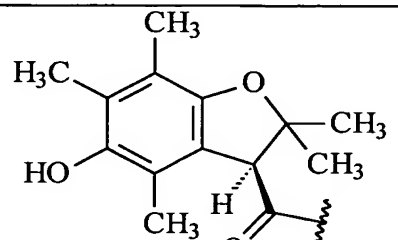
173. The method according to claim 155, wherein the compound of said composition is compound 68, or a salt thereof.

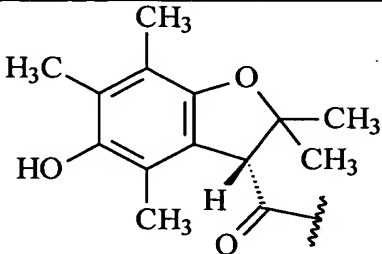
174. The method according to claim 131, wherein the compound of said composition has the formula



and wherein Y is defined as:

| Compound Number | Y |
|-----------------|---|
| 105 | ; |
| 106 | ; |
| 107 | ; |
| 108 | ; |

| Compound Number | Y |
|-----------------|--|
| 109 |  |
| 110 |  |
| 111 |  |
| 112 |  |
| 113 |  |

| Compound Number | Y |
|-----------------|--|
| 114 |  |

or salts thereof.

175. The method according to claim 174, wherein the compound of said composition is compound 105, or a salt thereof.

176. The method according to claim 174, wherein the compound of said composition is compound 106, or a salt thereof.

177. The method according to claim 174, wherein the compound of said composition is compound 107, or a salt thereof.

178. The method according to claim 174, wherein the compound of said composition is compound 108, or a salt thereof.

179. The method according to claim 174, wherein the compound of said composition is compound 109, or a salt thereof.

180. The method according to claim 174, wherein the compound of said composition is compound 110, or a salt thereof.

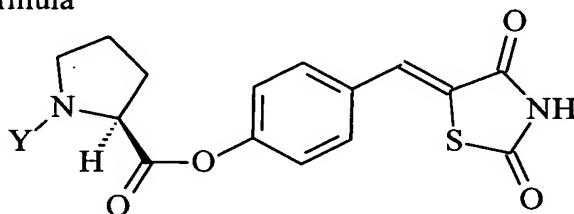
181. The method according to claim 174, wherein the compound of said composition is compound 111, or a salt thereof.

182. The method according to claim 174, wherein the compound of said composition is compound 112, or a salt thereof.

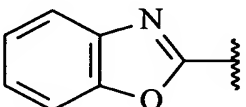
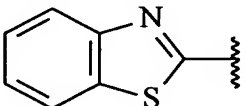
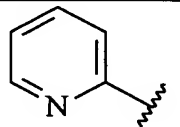
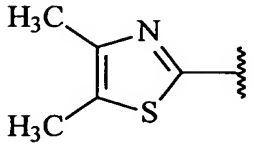
183. The method according to claim 174, wherein the compound of said composition is compound 113, or a salt thereof.

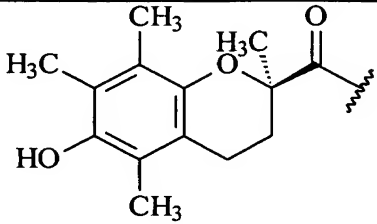
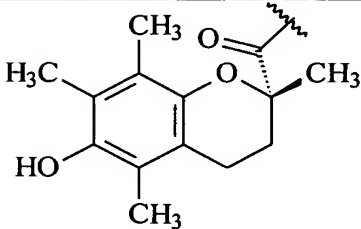
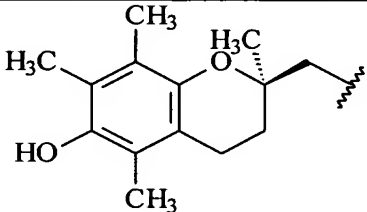
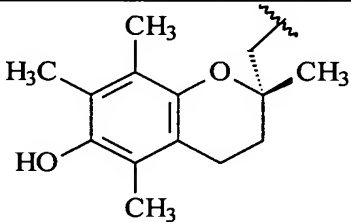
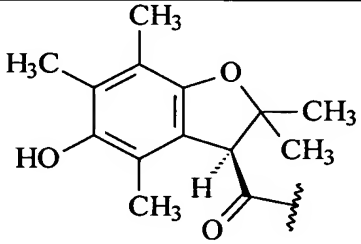
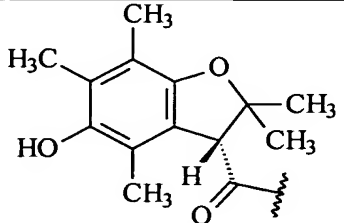
184. The method according to claim 174, wherein the compound of said composition is compound 114, or a salt thereof.

185. The method according to claim 131, wherein the compound of said composition has the formula



and wherein Y is defined as:

| Compound number | Y |
|-----------------|---|
| 115 |  ; |
| 116 |  ; |
| 117 |  ; |
| 118 |  ; |

| Compound number | Y |
|-----------------|--|
| 119 |  |
| 120 |  |
| 121 |  |
| 122 |  |
| 123 |  |
| 124 |  |

186. The method according to claim 185, wherein the compound of said composition is compound 115, or a salt thereof.

187. The method according to claim 185, wherein the compound of said composition is compound 116, or a salt thereof.

188. The method according to claim 185, wherein the compound of said composition is compound 117, or a salt thereof.

189. The method according to claim 185, wherein the compound of said composition is compound 118, or a salt thereof.

190. The method according to claim 185, wherein the compound of said composition is compound 119, or a salt thereof.

191. The method according to claim 185, wherein the compound of said composition is compound 120, or a salt thereof.

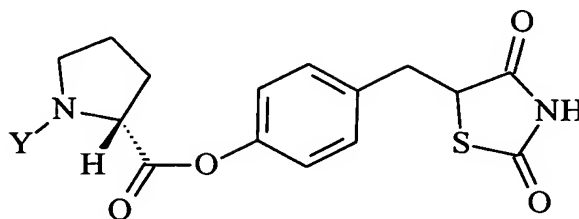
192. The method according to claim 185, wherein the compound of said composition is compound 121, or a salt thereof.

193. The method according to claim 185, wherein the compound of said composition is compound 122, or a salt thereof.

194. The method according to claim 185, wherein the compound of said composition is compound 123, or a salt thereof.

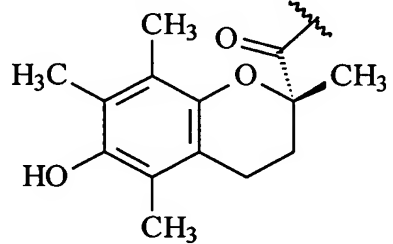
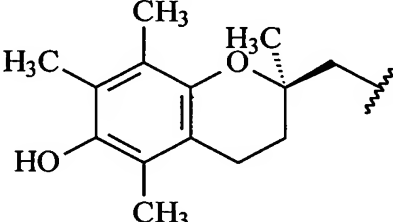
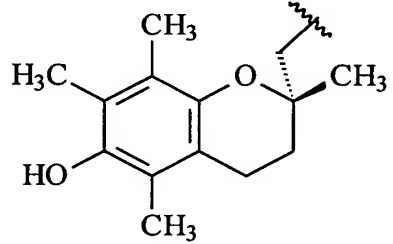
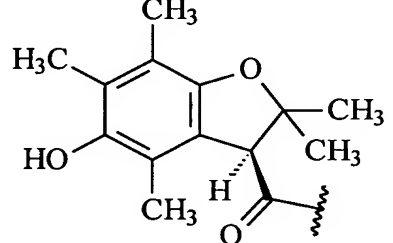
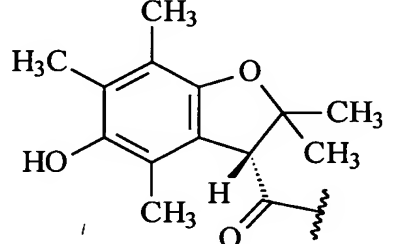
195. The method according to claim 185, wherein the compound of said composition is compound 124, or a salt thereof.

196. The method according to claim 131, wherein the compound of said composition has the formula



and wherein Y is defined as:

| Compound number | Y |
|-----------------|---|
| 125 | ; |
| 126 | ; |
| 127 | ; |
| 128 | ; |
| 129 | ; |

| Compound number | Y |
|-----------------|--|
| 130 |  |
| 131 |  |
| 132 |  |
| 133 |  |
| 134 |  |

or salts thereof.

197. The method according to claim 196, wherein the compound of said composition is compound 125, or a salt thereof.

198. The method according to claim 196, wherein the compound of said composition is compound 126, or a salt thereof.

199. The method according to claim 196, wherein the compound of said composition is compound 127, or a salt thereof.

200. The method according to claim 196, wherein the compound of said composition is compound 128, or a salt thereof.

201. The method according to claim 196, wherein the compound of said composition is compound 129, or a salt thereof.

202. The method according to claim 196, wherein the compound of said composition is compound 130, or a salt thereof.

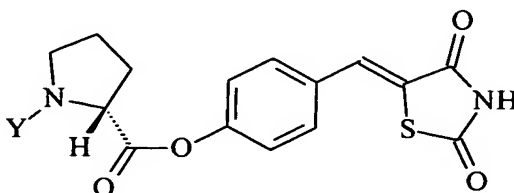
203. The method according to claim 196, wherein the compound of said composition is compound 131, or a salt thereof.

204. The method according to claim 196, wherein the compound of said composition is compound 132, or a salt thereof.

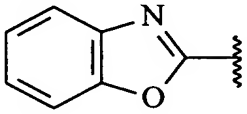
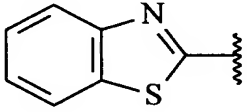
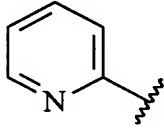
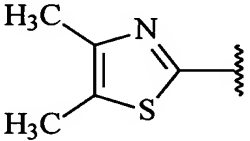
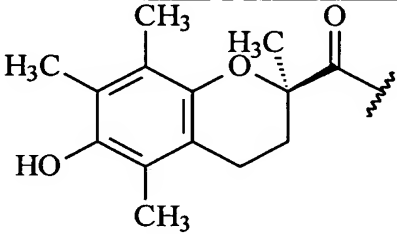
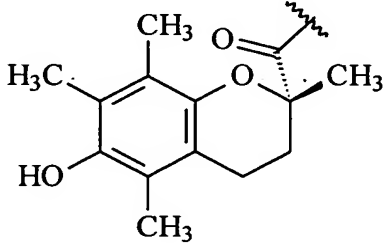
205. The method according to claim 196, wherein the compound of said composition is compound 133, or a salt thereof.

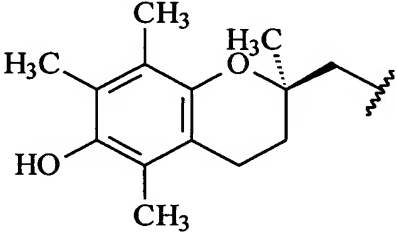
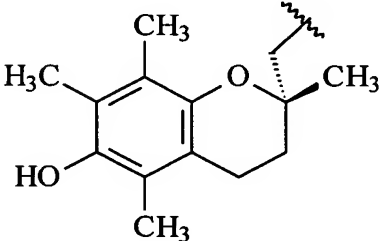
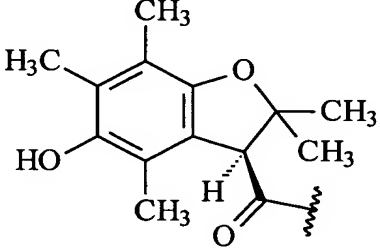
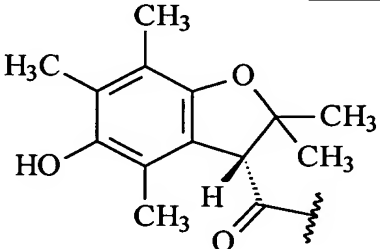
206. The method according to claim 196, wherein the compound of said composition is compound 134, or a salt thereof.

207. The method according to claim 131, wherein the compound of said composition has the formula



and wherein Y is defined as:

| Compound number | Y |
|-----------------|--|
| 135 |  ; |
| 136 |  ; |
| 137 |  ; |
| 138 |  ; |
| 139 |  ; |
| 140 |  ; |

| Compound number | Y |
|-----------------|--|
| 141 |  |
| 142 |  |
| 143 |  |
| 144 |  |

208. The method according to claim 207, wherein the compound of said composition is compound 135, or a salt thereof.

209. The method according to claim 207, wherein the compound of said composition is compound 136, or a salt thereof.

210. The method according to claim 207, wherein the compound of said composition is compound 137, or a salt thereof.

211. The method according to claim 207, wherein the compound of said composition is compound 138, or a salt thereof.

212. The method according to claim 207, wherein the compound of said composition is compound 139, or a salt thereof.

213. The method according to claim 207, wherein the compound of said composition is compound 140, or a salt thereof.

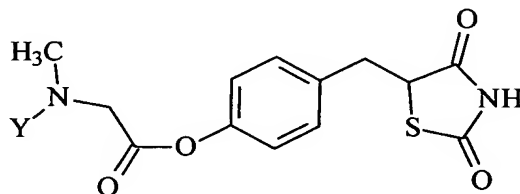
214. The method according to claim 207, wherein the compound of said composition is compound 141, or a salt thereof.

215. The method according to claim 207, wherein the compound of said composition is compound 142, or a salt thereof.

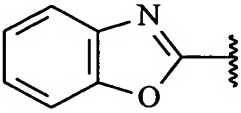
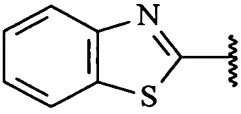
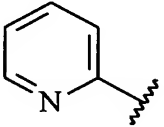
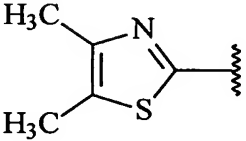
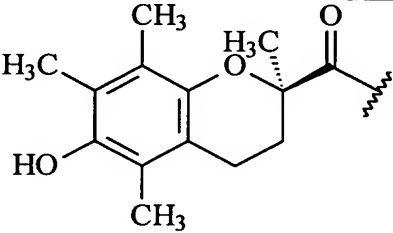
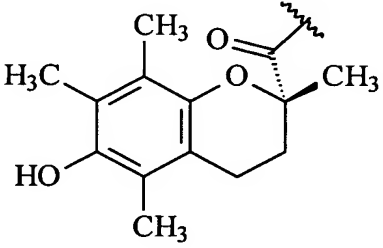
216. The method according to claim 207, wherein the compound of said composition is compound 143, or a salt thereof.

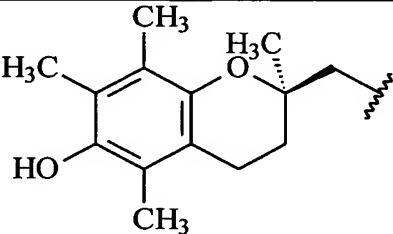
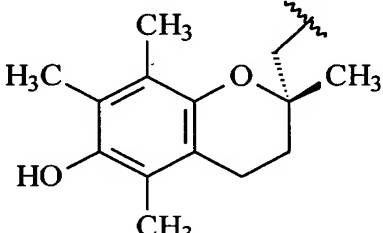
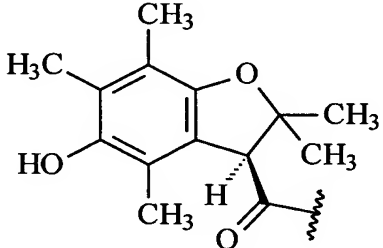
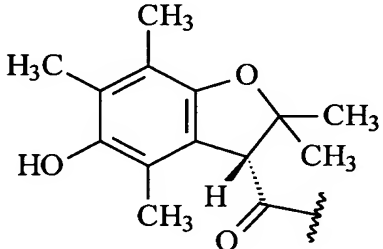
217. The method according to claim 207, wherein the compound of said composition is compound 144, or a salt thereof.

218. The method according to claim 131, wherein the compound of said composition has the formula



and wherein Y is defined as:

| Compound number | Y |
|-----------------|--|
| 185 |  ; |
| 186 |  ; |
| 187 |  ; |
| 188 |  ; |
| 189 |  ; |
| 190 |  ; |

| Compound number | Y |
|-----------------|--|
| 191 |  |
| 192 |  |
| 193 |  |
| 194 |  |

219. The method according to claim 218, wherein the compound of said composition is compound 185, or a salt thereof.

220. The method according to claim 218, wherein the compound of said composition is compound 186, or a salt thereof.

221. The method according to claim 218, wherein the compound of said composition is compound 187, or a salt thereof.

222. The method according to claim 218, wherein the compound of said composition is compound 188, or a salt thereof.

223. The method according to claim 218, wherein the compound of said composition is compound 189, or a salt thereof.

224. The method according to claim 218, wherein the compound of said composition is compound 190, or a salt thereof.

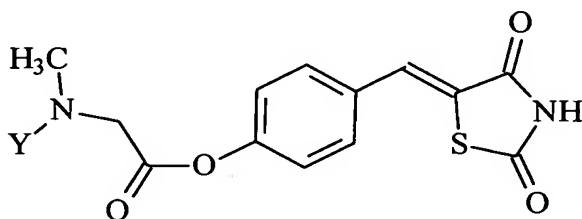
225. The method according to claim 218, wherein the compound of said composition is compound 191, or a salt thereof.

226. The method according to claim 218, wherein the compound of said composition is compound 192, or a salt thereof.

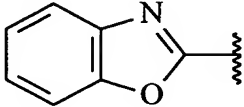
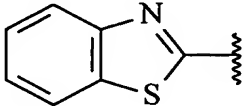
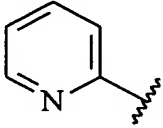
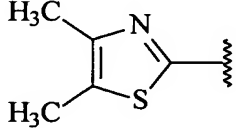
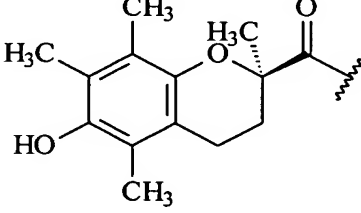
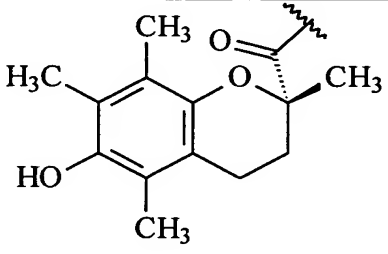
227. The method according to claim 218, wherein the compound of said composition is compound 193, or a salt thereof.

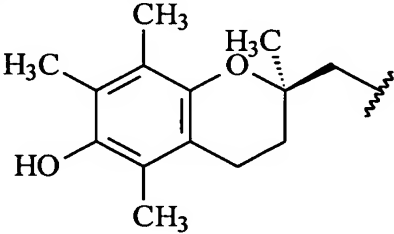
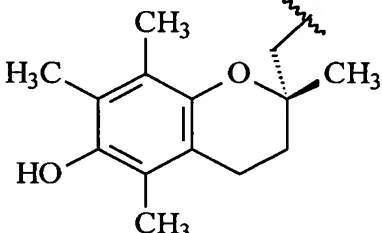
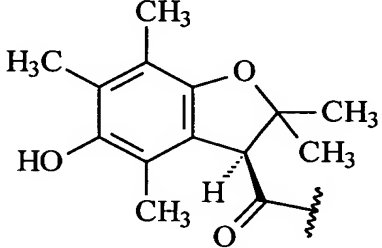
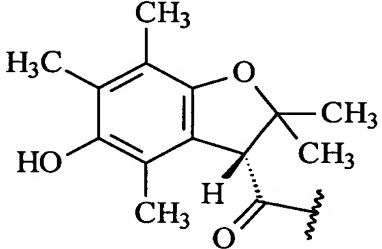
228. The method according to claim 218, wherein the compound of said composition is compound 194, or a salt thereof.

229. The method according to claim 131, wherein the compound of said composition has the formula



and wherein Y is defined as:

| Compound number | Y |
|-----------------|--|
| 195 |  ; |
| 196 |  ; |
| 197 |  ; |
| 198 |  ; |
| 199 |  ; |
| 200 |  ; |

| Compound number | Y |
|-----------------|--|
| 201 |  |
| 202 |  |
| 203 |  |
| 204 |  |

230. The method according to claim 229, wherein the compound of said composition is compound 195, or a salt thereof.

231. The method according to claim 229, wherein the compound of said composition is compound 196, or a salt thereof.

232. The method according to claim 229, wherein the compound of said composition is compound 197, or a salt thereof.

233. The method according to claim 229, wherein the compound of said composition is compound 198, or a salt thereof.

234. The method according to claim 229, wherein the compound of said composition is compound 199, or a salt thereof.

235. The method according to claim 229, wherein the compound of said composition is compound 200, or a salt thereof.

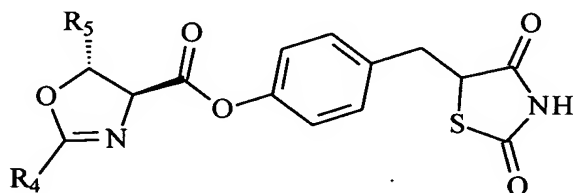
236. The method according to claim 229, wherein the compound of said composition is compound 201, or a salt thereof.

237. The method according to claim 229, wherein the compound of said composition is compound 202, or a salt thereof.

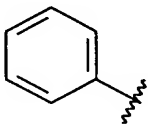
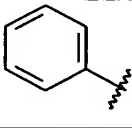
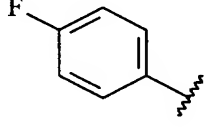
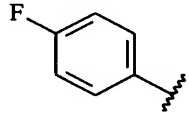
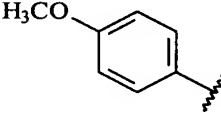
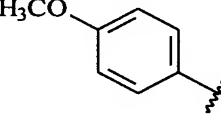
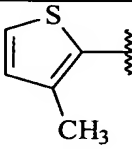
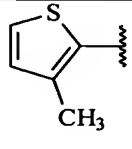
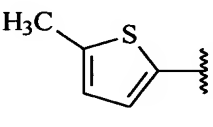
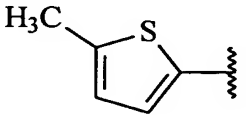
238. The method according to claim 229, wherein the compound of said composition is compound 203, or a salt thereof.

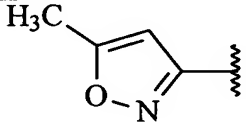
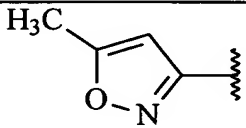
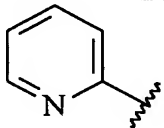
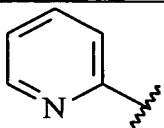
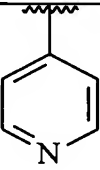
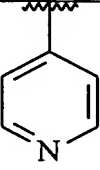
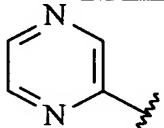
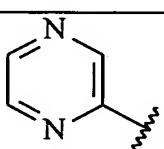
239. The method according to claim 229, wherein the compound of said composition is compound 204, or a salt thereof.

240. The method according to claim 131, wherein the compound of said composition has the formula



and wherein R₄ and R₅ are defined as:

| Compound number | R ₄ | R ₅ |
|-----------------|---|-------------------|
| 225 |  | H ; |
| 226 |  | CH ₃ ; |
| 227 |  | H ; |
| 228 |  | CH ₃ ; |
| 229 |  | H ; |
| 230 |  | CH ₃ ; |
| 231 |  | H ; |
| 232 |  | CH ₃ ; |
| 233 |  | H ; |
| 234 |  | CH ₃ ; |

| Compound number | R ₄ | R ₅ |
|-----------------|---|-----------------------------------|
| 235 |  | H ; |
| 236 |  | CH ₃ ; |
| 237 |  | H ; |
| 238 |  | CH ₃ ; |
| 239 |  | H ; |
| 240 |  | CH ₃ ; |
| 241 |  | H ; or |
| 242 |  | CH ₃ or salts thereof. |

241. The method according to claim 240, wherein the compound of said composition is compound 225, or a salt thereof.

242. The method according to claim 240, wherein the compound of said composition is compound 226, or a salt thereof.

243. The method according to claim 240, wherein the compound of said composition is compound 227, or a salt thereof.

244. The method according to claim 240, wherein the compound of said composition is compound 228, or a salt thereof.

245. The method according to claim 240, wherein the compound of said composition is compound 229, or a salt thereof.

246. The method according to claim 240, wherein the compound of said composition is compound 230, or a salt thereof.

247. The method according to claim 240, wherein the compound of said composition is compound 231, or a salt thereof.

248. The method according to claim 240, wherein the compound of said composition is compound 232, or a salt thereof.

249. The method according to claim 240, wherein the compound of said composition is compound 233, or a salt thereof.

250. The method according to claim 240, wherein the compound of said composition is compound 234, or a salt thereof.

251. The method according to claim 240, wherein the compound of said composition is compound 235, or a salt thereof.

252. The method according to claim 240, wherein the compound of said composition is compound 236, or a salt thereof.

253. The method according to claim 240, wherein the compound of said composition is compound 237, or a salt thereof.

254. The method according to claim 240, wherein the compound of said composition is compound 238, or a salt thereof.

255. The method according to claim 240, wherein the compound of said composition is compound 239, or a salt thereof.

256. The method according to claim 240, wherein the compound of said composition is compound 240, or a salt thereof.

257. The method according to claim 240, wherein the compound of said composition is compound 241, or a salt thereof.

258. The method according to claim 240, wherein the compound of said composition is compound 242, or a salt thereof.

259. The method according to claim 131, wherein:
A is NH and B is sulfur;
D₁-D₆ are C;
E can be attached to one or more of the atoms located at D₂, D₃, D₅ or D₆;
P and Q are a double bond;
E can be the same or different and is a moiety selected from the group consisting of H, C₁₋₁₀ alkyl, and substituted alkyl groups; and
X is a substituted carboxylic group comprising -N-(C)₁₋₃-C(O)O- that is attached to D₁;
or salts of the compound of Formula I.

260. The method according to claim 131, wherein:
A is NH and B is sulfur;
D₁-D₆ are C;
E can be attached to one or more of the atoms located at D₂, D₃, D₅ or D₆;
P and Q are hydrogen;
E is hydrogen; and

X is a substituted carboxylic group comprising $-N-(C)_{1-3}-C(O)O-$ that is attached to D_1 ;
or salts of the compound of Formula I.